

REMARKS

Claims 1-24 are pending in this application. Claims 1-24 stand rejected.

Claim 14 stands objected to as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 14 has now been cancelled.

Claims 1, 5, 7-9, 12, 16, 18 and 21 stand rejected under 35 U.S.C. 102(b) as anticipated by Chang et al. These rejections are respectfully traversed.

With respect to claim 1, the Examiner states that Chang et al teaches in column 4, lines 33-41 and in column 13, lines 62 through column 14, line 7 a method for hydraulic fracturing including (c) applying pressure to the displacement fluid by pumping so as to inject the cross-linked fracturing fluid through the perforation into the formation. This is not an accurate statement of what is taught by Chang et al. Please see FIG. 5 of Chang et al and column 13, lines 42-61. Chang et al teaches placement of cross-linked polymer over upper zone 24 in the annulus of a well to prevent fluid loss to zone 24 as surface pressure is measured in the annulus. This makes possible monitoring of pressure in the annulus during fracturing of a lower zone. There is no teaching or suggestion of injecting the cross-linked fluid from the annulus through perforations and into the formation to form a hydraulic fracture. Therefore, claim 1 is not anticipated by Chang et al.

With respect to claim 5, the Examiner states that Chang et al teaches in column 7, lines 2-6 and in column 17, lines 9-13 a method where step (a) is performed by placing the cross-linked fracturing fluid in the wellbore in the form of discrete volumes of fluid in a carrier fluid. Applicant suggests that Chang et al teaches use of a dry granulated fluid loss agent mixed in a carrier fluid, not a discrete volume of fluid in a carrier fluid. Please see column 16, line 10. Also, claim 5, having all the limitations of claim 1 and dependant thereon, is not anticipated for reasons stated above.

With respect to claim 7, Chang et al may teach placing fluid into a formation via a wellbore, but it is not inherent that a fluid will fall by gravity in a wellbore without teachings of fluid density. Claim 7, dependent on claim 1 and having all the limitations thereof, is not anticipated for reasons stated above.

With respect to claim 8, Chang et al refers to other practices involving proppants. Chang et al does not teach a cross-link fracturing fluid containing a proppant.

With respect to claim 9, Chang et al teaches a fluid loss agent to be used during completion of workover of wells. This is a different process than the hydraulic fracturing process of applicant. Therefore, claim 9, dependent on claim 1, is believed to be patentable.

With respect to claim 12, Chang et al teaches the well-known method of hydraulic fracturing with a proppant and guar polymer, which is a “dirty” polymer. Chang et al does not teach a separate operation before a polymer degrades. Also for reasons stated above, Claim 12 is believed to be patentable.

With respect to claim 16, Chang et al teaches cross-linked fracturing fluid comprising a water-soluble polymer, but does not teach the steps set out in claim 1, from which claim 16 depends.

With respect to claim 18, Chang et al teaches a cross-linking of the fracturing fluid that is delayed, but does not teach the steps set out in claim 1, from which claim 18 depends.

With respect to claim 21, Chang et al teaches the concentrations of polymer slurry required to achieve a desired concentrations per 1,000 gallons of gelled fluid. There is no teaching of displacement from the wellbore by fluid having a lower specific gravity.

Claims 2-4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al in view of Holtmyer et al (4,021,355). These rejections are respectfully traversed. Neither Chang et al nor Holtmyer et al teaches or suggests either steps (a), step (b), or step (c) of claim 1.

Claims 2-4, dependant upon claim 1 and having all the limitations thereof, are believed patentable for this reason.

Claims 6, 19-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al in view of Cameron (4,916,946). These rejections are respectfully traversed. Neither Chang et al nor Cameron teaches nor suggests either step (a), (b), or (c) of claim 1. Therefore, claim 6, 19-20, dependant on claim 1, are believed to be patentable over Chang et al in view of Cameron.

Claims 10 and 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al in view of Jennings, Jr. (5,411,091). These rejections are respectfully traversed. Neither Chang et al nor Jennings, Jr. teaches or suggests either steps (a), (b), or (c) of claim 1, upon which claims 10 and 11 depend. Therefore, claim 10 and 11 are believed to be patentable.

Claim 13 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al in view of Tjon-Joe-Pin et al (5,566,759). This rejection is respectfully traversed. Neither Chang et al nor Tjon-Joe-Pin et al teaches nor suggest either steps (a), (b), or (c) of claim 1, from which claim 13 depends. Claim 13 contains all of the limitations of claim 1. Therefore, claim 13 is believed to be patentable over the references cited.

Claim 15 stands rejected under 35 U.S.C. 103a) as being unpatentable over Chang et al in view of Nierode et al (5,890,536). This rejection is respectfully traversed. Nierode et al teaches use of ball sealers, but neither Nierode et al nor Chang et al teaches or suggests either step (a), (b), or (c) of claim 1, from which claim 15 depends. Claim 15 contains all the limitations of claim 1. Therefore, claim 15 is believed to be patentable.

Claim 17 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al in view of Holtmyer et al (4,033,415). This rejection is respectfully traversed. It is agreed that Holtmyer et al teach the possibility of syneresis, but neither Chang et al nor Holtmyer et al

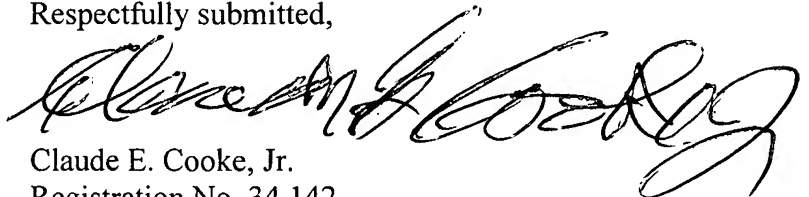
teaches a method wherein a cross-linked fracturing fluid is selected to exhibit syneresis. The references do not teach or suggest either steps (a), (b), or (c) of claim 1, from which claim 17 depends. Therefore claim 17 is believed to be patentable.

Claims 22-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. Claims 22-24, as is true of all dependent claims standing rejected, all having the limitations of claim 1, are believed to be patentable since Chang et al nor any other of the references cited, discloses or suggests steps (a), (b), and (c) of claim 1, from which claims 22-24 and the other dependent claims depend.

Regarding all rejections under 35 U.S.C. 103(a), the combinations of references cited are not sufficiently pertinent to the particular problem faced by applicant as to reasonably suggest applicant's claimed solution to those skilled in the art. Neither would one skilled in the art be likely to consider such references in an attempt to solve the problem faced by applicant.

In view of the amendment and the reasons stated above, the Examiner is respectfully requested to enter the amendment canceling claim 14 and to withdraw the rejection of claims 1-13 and 15-24 and to expeditiously allow this case to issue. If there are any additional fees due, please see the enclosed PTO-2038 and charge the credit card described thereon.

Respectfully submitted,



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